

## CLAIMS

Having thus described the aforementioned invention, we claim:

1. An apparatus for electrically earthing a load-side conductor in a controller, said apparatus comprising:
  - a base;
  - a lug electrically connected to said load-side conductor and fixedly attached to said base;
  - an earthing bar adapted to contact said lug and provide a ground path from said lug, said earthing bar adapted to move between a charged position and an earthed position;
  - a ground connection electrically connected to said earthing bar and adapted to earth said earthing bar;
  - a spring having a first end and a second end, said first end engaging said earthing bar and said second end engaging said base, said spring providing a motive force for moving said earthing bar from said charged position to said earthed position;
  - a charging mechanism for compressing said spring and moving said earthing bar from said earthed position to said charged position;
  - an actuating mechanism for releasing said spring and causing said earthing bar to move from said charged position to said earthed position; and
  - an operator for tripping said actuating mechanism.
2. The apparatus of Claim 1 wherein said lug includes a bevel against which said earthing bar rests when said earthing bar is in said earthed position.
3. The apparatus of Claim 1 wherein said base includes a positioning member adapted for engaging said lug wherein said lug is held in spaced relation to said base.

1           4.     The apparatus of Claim 1 wherein said lug includes a flat surface  
2     adapted to receive a load-side terminal.

1           5.     The apparatus of Claim 1 wherein said lug is adapted to receive a  
2     line-side conductor.

1           6.     The apparatus of Claim 1 further comprising a tang on said lug,  
2     said tang adapted to fixedly engage a corresponding slot in said base.

1           7.     The apparatus of Claim 1 wherein said operator includes an  
2     indicator with a first indication corresponding to said earthing bar in said  
3     charged position and a second indication corresponding to said earthing bar in  
4     said earthed position.

1           8.     The apparatus of Claim 1 wherein said actuating mechanism  
2     includes

3                 a first member connected to a second member at a first pivot which is  
4     constrained to a slot in a third member,

5                 said second member has a distal end opposite said first pivot, said distal  
6     end pivotably connected to a sliding member,

7                 said sliding member fixedly attached to said earthing bar,

8                 said first member having a central pivot held in fixed spatial relation to  
9     said base,

10                said third member engaging said charging mechanism,

11                whereby said first member and said second member are held in a fixed  
12     position with said spring compressed.

1           9.     The apparatus of Claim 8 wherein, with said earthing bar in said  
2     charged position,

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3 said first pivot is fixedly positioned slightly off a line connecting said  
4 central pivot of said first member and said distal end of said second member.

1 10. The apparatus of Claim 8 wherein said first and second members  
2 are adapted to hold said earthing bar in said charged position whereby said first  
3 pivot is fixedly positioned slightly off a line connecting said central pivot of said  
4 first member and said distal end of said second member.

1 11. The apparatus of Claim 8 wherein said first and second members  
2 are adapted to hold said earthing bar in said charged position whereby said first  
3 and second members form an obtuse angle and said first pivot is fixedly  
4 positioned.

1 12. The apparatus of Claim 8 wherein said first and second members  
2 are adapted to permit said earthing bar to be in said earthed position whereby  
3 said first and second members form an acute angle.

1 13. An apparatus for electrically earthing a load-side conductor in a  
2 controller, said apparatus comprising:

3 a base;

4 a lug electrically connected to said load-side conductor and fixedly  
5 attached to said base, said lug including a bevel;

6 an earthing bar adapted to contact said lug and provide a ground path  
7 from said lug, said earthing bar adapted to move between a charged position  
8 and an earthed position;

9 a ground connection electrically connected to said earthing bar and  
10 adapted to earth said earthing bar;

11 a spring having a first end and a second end, said first end engaging said  
12 earthing bar and said second end engaging said base, said spring providing a  
13 motive force for moving said earthing bar from said charged position to said  
14 earthed position;

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15 a charging mechanism for compressing said spring and moving said  
16 earthing bar to said charged position;

17 an actuating mechanism for releasing said spring and causing said  
18 earthing bar to move to said earthed position; and

19 an operator for tripping said actuating mechanism.

1 14. An apparatus for electrically earthing a load-side conductor in a  
2 controller, said apparatus comprising:

3 an earthing member connected to ground, said earthing bar adapted to  
4 move between a charged position and an earthed position in which said load-  
5 side conductor is earthed;

6 a spring providing a motive force for moving said earthing bar from said  
7 charged position to said earthed position, wherein said spring is compressed in  
8 said charged position;

9 a sliding member fixedly attached to said earthing member;

10 a first member having a central pivot held in fixed spatial relation;

11 a second member having a first distal end connected to said first member  
12 at a first pivot and an opposite distal end connected to said sliding member at a  
13 second pivot; and

14 a third member defining a slot, said first pivot constrained to said slot;

15 whereby movement of said third member causes said first pivot to toggle  
16 between a first position corresponding to said charged position and a second  
17 position corresponding to said earthed position;

1 15. An apparatus for electrically earthing a load-side conductor in a  
2 controller, said apparatus comprising:

3 a means for electrically connecting said load-side conductor to a lug;

4 a means for earthing said lug;

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5 a means for storing energy; and  
6 a means for releasing said stored energy.

1 16. The apparatus of Claim 15 wherein said means for earthing  
2 includes

3 a means for contacting said lug with an earthing conductor; and  
4 a means for earthing said earthing conductor.

1 17. The apparatus of Claim 15 wherein said means for storing energy  
2 includes

3 a means for compressing a spring; and  
4 a means for holding said spring in a compressed state.

1 18. The apparatus of Claim 15 whereby said means for releasing said  
2 stored energy includes

3 a means for decompressing a compressed spring.